

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

**WHAT IS CLAIMED IS**

1. A head for string trimmer machines including: a housing member having a central axis for attachment to a string trimmer machine; and a serpentine guide path in the housing for receiving a length of trimmer line, the guide path located in a plane including the central axis and terminating in exit openings on opposite sides of the housing member.

2. A head according to Claim 1 wherein the exit openings are located in a second plane perpendicular to the plane including the central axis, and wherein the guide path has a portion thereof located above or below the second plane.

3. A head according to Claim 2 wherein the exit openings are located on diametrically opposite sides of the housing member.

4. A head according to Claim 3 wherein at least the portion of the exit openings in contact with a trimmer line when pulled outwardly from the exit openings is metal.

5. A head according to Claim 4 wherein the housing member includes an upper housing portion and a lower housing portion with the guide path formed by cooperating parts of the upper and lower housing portions.

1           6. A head according to Claim 5 wherein the upper and lower  
2           housing portions are releasably interconnected with one another.

3           7. A head according to Claim 6 wherein the lower housing  
4           portion has an upper side and a lower side, with the upper side  
5           thereof releasably interconnected with the upper housing portion  
6           and the lower side thereof exposing part of the guide path to  
7           permit insertion and removal of a segment of string trimmer line  
8           thereat.

9           10. A head according to Claim 7 wherein the releasable  
10          interconnection of the upper and lower housing portions of the  
11          housing is effected by spring tabs extending upwardly from the  
12          lower housing portions with corresponding tab-engaging shoulders on  
13          the upper housing portion for releasable engagement by the spring  
14          tabs.

16           17. A head according to Claim 8 including a second serpentine  
18          guide path in the housing member located in a second plane  
19          including the central axis, the second guide path terminating in a  
20          second set of exit openings on opposite sides of the housing  
21          member.

22           23. A head according to Claim 9 wherein the guide paths are  
24          perpendicular to one another.

11. A head according to Claim 1 including a second serpentine  
1 guide path in the housing member located in a second plane  
2 including the central axis, the second guide path terminating in a  
3 second set of exit openings on opposite sides of the housing  
4 member.

5  
6 12. A head according to Claim 11 wherein the guide paths are  
7 perpendicular to one another.

8  
9 13. A head according to Claim 1 wherein the housing member  
10 includes an upper housing portion and a lower housing portion with  
11 the guide path formed by cooperating parts of the upper and lower  
12 housing portions.

13  
14 14. A head according to Claim 13 wherein the upper and lower  
15 housing portions are releasably interconnected with one another.

16  
17 15. A head according to Claim 14 wherein the lower housing  
18 portion has an upper side and a lower side, with the upper side  
19 thereof releasably interconnected with the upper housing portion  
20 and the lower side thereof exposing part of the guide path to  
21 permit insertion and removal of a segment of string trimmer line  
22 thereat.

16. A head according to Claim 15 wherein the releasable  
1 interconnection of the upper and lower housing portions of the  
2 housing is effected by spring tabs extending upwardly from the  
3 lower housing portions with corresponding tab-engaging shoulders on  
4 the upper housing portion for releasable engagement by the spring  
5 tabs.

6  
7 17. A head according to Claim 1 wherein at least the portion  
8 of the exit openings in contact with a trimmer line when pulled  
9 outwardly from the exit openings is metal.

10  
11 18. A head according to Claim 17 wherein the exit openings  
12 are located on diametrically opposite sides of the housing member.

13  
14 19. A head for string trimmer machines including:  
15 an upper housing portion having a central axis for  
16 attachment to the drive shaft of a string trimmer machine;  
17 a lower housing portion for releasable interconnection  
18 with the upper housing member, and having a central axis aligned  
19 with the central axis of the upper portion member; and  
20 cooperating channels on the upper housing portion and the  
21 lower housing portion forming a non-linear serpentine guide path  
22 for a length of trimmer line, the guide path located in a plane  
23 including the central axes of the upper and lower housing portions  
24 and terminating in exit openings on opposite sides thereof.

1           20. A head according to Claim 19 wherein the exit openings  
2           are located in a second plane perpendicular to the plane including  
3           the central axis, and wherein the guide path has a portion thereof  
4           located above or below the second plane.

5           21. A head according to Claim 20 wherein at least the portion  
6           of the exit openings in contact with a trimmer line when pulled  
7           outwardly from the exit openings is metal.

8           22. A head according to Claim 19 wherein at least the portion  
9           of the exit openings in contact with a trimmer line when pulled  
10          outwardly from the exit openings is metal.

11          23. A head according to Claim 22 wherein the guide path has,  
12          at least in part, a cross-sectional configuration conforming to the  
13          cross-sectional configuration of a string trimmer line to be guided  
14          therein.

15          24. A head according to Claim 23 wherein the releasable  
16          interconnection of the upper and lower housing portions of the  
17          housing is effected by spring tabs extending upwardly from the  
18          lower housing portions with corresponding tab-engaging shoulders on  
19          the upper housing portion for releasable engagement by the spring  
20          tabs.

1           25. A head according to Claim 19 wherein at least the portion  
2           of the exit openings in contact with a trimmer line when pulled  
3           outwardly from the exit openings is metal.

4           26. A head according to Claim 19 wherein the guide path has,  
5           at least in part, a cross-sectional configuration conforming to the  
6           cross-sectional configuration of a string trimmer line to be guided  
7           therein.

8           27. A head according to Claim 26 wherein at least the portion  
9           of the exit openings in contact with a trimmer line when pulled  
10          outwardly from the exit openings is metal.

12          28. A head for string trimmer machines including: a housing  
13          member having a central axis and adapted for attachment to the  
14          drive shaft of a string trimmer machine; and means in the housing  
15          member for guiding a length of string trimmer line in a serpentine  
16          path in a plane including the central axis, the path terminating in  
17          exit openings on opposite sides of the housing member.

19          29. A head according to Claim 28 further including means for  
20          providing access to the non-linear guide path at a point  
21          intermediate the length of the guide path.

1           31. The head according to Claim 29 wherein the cross-  
2           sectional configuration of at least a portion of the guide path is  
3           a rectangular cross section.

4           32. The head according to Claim 28 wherein the cross-  
5           sectional configuration of at least a portion of the guide path is  
6           a rectangular cross section.